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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,984	06/30/2003	Kang Soo Seo	46500-000534/US	6983
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EXAMINER				
ZHAO, DAQUAN				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/607,984

Applicant(s)

SEO ET AL.

Examiner

DAQUAN ZHAO

Art Unit

2621

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4, 5, 7, 8, 11, 12, 14-25 and 27-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-5, 7-8, 11-12, 14-25, 27-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB08)
Paper No(s)/Mail Date 1/21/2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ ~~Notice of Informal Patent Application~~
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/9/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 4-5, 7-8, 11-12, 14-25, 27-34 have been considered but are moot in view of the new ground(s) of rejection.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: there's no antecedent basis for "computer-readable medium" in claims 1, 4-5, 7-8, 11-12 and 14-15.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 4-5, 7-8, 11-12 and 14-15 are rejected under 35 U.S.C. 101 because claims are directed to non-statutory subject matter.

For claim 1, the examiner treats the claimed "computer-readable medium" as a signal, which is a non-statutory subject matter since there's no antecedent basis for the claimed "computer- readable medium" in the specification.

Claims 4-5, 7-8, 11-12 and 14-15 incorporate the same deficiency as set forth in claim 1 above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4, 5, 7, 8, 11, 14, 16, 17, 18, 19, 20, 23- 25, 29, 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 5,870,523) and Hirayama et al (US 5,819,003) and further in view of Tsuga et al (US 5,895, 124).

For claim 1, Kikuchi et al teach a computer readable medium (e.g. recording medium-> optical disk in figure 3) having a data structure for managing reproduction of at least video data having multiple reproduction paths recorded on the computer readable medium (e.g. figure 30, column 19, lines 19-56, multiple angle reproduction of AGL-C_B#1, AGL_C_B#I, AGL_C_B#9), comprising: at least one navigation area storing navigation management information for managing reproduction of the video data having multiple reproduction paths recorded on the computer readable medium, said navigation management information having angle change recording information corresponding to each of a plurality of video data blocks (e.g. column 18, lines 44-

column 19, line 4, angel change information is in the Playback Control Information data, wherein the PCI is navigation data, also see figures 27-29, and also see figure 25, column 18, lines 5-26 for data structure of the NAV).

Kikuchi et al also teach "said angle change information indicates whether an angle change is permitted or not, and the angle change information further indicates where an angle change is permitted, (Figure 37, step s23 and figure 40 and column 27, lines 5-44 clearly shown if there is angle data present, the system of Kikuchi et al then gets the "next cell address" (figure 40, s43) to perform angle change at the "next cell address", which is permitting the angle change when there is angle data. If there's no angel data, a message "there is no angle to be change" indicates the angle change is not permitted. Therefore, the examiner considers "The presence/absence of angle has been given as angle information (NSULS_ANGLE, SML_AGLI)" as the claimed "said angle change information indicates whether an angle change is permitted or not, and the angle change information further indicates where an angle change is permitted") and thus, the angle change from a current angle to a requested angle is perform if the angle change is permitted (e.g. figure 40, step S40 "Angle data present?" and step S42 "next cell address(retrieve Angc Data by Angle No.)).

However, Kikuchi et al fail to specify the reproduction of the video data of the current angle is maintained until a reproduction position reaches a position at which the angel change is permitted; and Kikuchi et al also fail to teach navigation management information including at least one entry point map, the entry point map having angle change information corresponding to each of a plurality of video data blocks, each video

block including at least one entry point, the angle change information associated with the entry point. Hirayama et al teach the reproduction of the video data of the current angle is maintained until a reproduction position reaches a position at which the angle change is permitted (e.g. figure 3B and column 6, lines 12-38, figure 20A and column 15, lines 30-42 Hirayama et al teach angle change happens after the completion of the previous angle. The system of Hirayama et al can display "It is not the time to switch scenes" when user operates the panel to switch the scenes Therefore, the current angle has to maintain till the position of the next angle). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Hirayama et al into the teaching of Kikuchi et al to allow the user to proceed scenes which a user wishes to enjoy and to reduce the user's anxiety when controlling the angle changing (Hirayama et al, column 15, lines 20-29).

Kikuchi et al and Hirayama et al fail to teach navigation management information including at least one entry point map, the entry point map having angle change information corresponding to each of a plurality of video data blocks, each video block including at least one entry point, the angle change information associated with the entry point. Tsuga et al teach navigation management information including at least one entry point map, the entry point map having angle change information corresponding to each of a plurality of video data blocks, each video block including at least one entry point, the angle change information associated with the entry point (e.g. figures 7-8, column 11, line 25- column 12, line 55, the examiner considers Rout Information #1 extracted from the program Chan Information table as the claimed entry point map

because the pointer in the route information links to the entry of the VOB and the VOB attributes specifies whether the VOB is an "ANGLE" or "NOT ANGLE"). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Tsuga et al into the teaching of Kikuchi et al and Hirayama et al to allow user to easily select desired combination of video scenes (e.g. Tsuga et al, column 6, lines 1-2).

Claims 16 and 17 are rejected for the same reasons as discussed in claim 1 above.

Claim 18 and 19 are rejected for the same reasons as discussed in claim 1 above with further limitation: a driver for driving an optical reproducing device to record data on the recording medium (e.g. figure 1, disk drive section 30); and a controller (e.g. figure 1, system CPU section 50).

For claim 4, Kikuchi et al teach navigation management information includes a start point of a presentation time stamp, said start point of the presentation time stamp corresponding to one of said plurality of video data blocks (e.g. column 18, line 44-column 19, line 3).

For claim 5, Kikuchi et al teach navigation management information includes source packet identification information for corresponding one of said plurality of video blocks (e.g. column 20, lines 14-23, DSI contains ID for VOB).

For claim 7, Kikuchi et al teach navigation management information includes an indicator for indicating a stream type information of the video data, said indicator corresponding to one of said plurality of video data block (e.g. figure 28, VOBU_CAT in

the PCI_GI indicates the category of the VOB, wherein the PCI_GI is in the PCI as shown in figure 27).

For claim 8, Kikuchi et al teach navigation management information includes offset information regarding I-picture pointing to an address of a last I-picture contained, said offset information corresponding to one of said plurality of video data blocks (e.g. column 20, lines 14-23, VOBU_IP_EA contains the last data item for the first I picture in the VOB unit).

For claim 14, Kikuchi et al teach video data having multiple reproduction paths are recorded in the unit of angle block which is referred by angel change recording information (e.g. figure 34, column 19, lines 5-16).

For claim 20, Kikuchi et al teach said controller is configured to create the navigation management information based on a reference information received via an interface, the navigation management information including an entry point map for accessing the corresponding video block, the entry point map having one or more entry points corresponding to one of said plurality of video data blocks(e.g. e.g. column 12, lines 52-63, and figure 29, NSLS_ANGLI has the map for "destination address of Angle cell number", wherein the "destination address corresponds to the "entry point" for the angle cell).

For claim 25, Kikuchi et al teach controller is configured to control the reproduction unit to delay the execution of the angle change until a reproducing position reaches to the end of the angle block or ignore the request for angle change if the request for angle change is not permitted, while said controller is configured to control

the reproducing unit to execute the angel change if the request for angle change is permitted (e.g. column 27, lines 45-59).

For claims 29, 33 and 34, Hirayama et al teach analyzing the angle change information if the angle change is requested via an interface, and selectively changing the reproduction path based on the analyzed angle change information (e.g. figures 4A-4C).

For claim 32, Hirayama et al teach delay the angel change until a reproduction position reaches to the end of the angle block (e.g. figure 3B and column 6, lines 12-38, figure 20A and column 15, lines 30-42 Hirayama et al teach angle change happens after the completion of the previous angel).

For claim 23, Kikuchi et al teach angle change information, wherein controller analyze the angle change information if the angle change is requested via an interface, and control the reproducing unit to selectively change the reproduction path based on the analyzed angle change information, the angle change information including at least one indicator for indicating whether the angle change is permitted or not(e.g. e.g. column 12, lines 52-63, and figure 29, NSLS_ANGLI has the map for "destination address of Angle cell number", wherein the "destination address corresponds to the "entry point" for the angle cell; Figure 37, step s23 and figure 40 and column 27, lines 5-44 clearly shown if there is angle data present, the system of Kikuchi et al then gets the "next cell address" (figure 40, s43) to perform angle change at the "next cell address", which is permitting the angle change when there is angle data. If there's no angel data, a message "there is no angle to be change" indicates the angle change is not permitted.

Therefore, the examiner considers "The presence/absence of angle has been given as angle information (NSULS_ANGLE, SML_AGLI)" teaches "said angle change information indicates whether an angle change is permitted or not, and the angle change information further indicates where an angle change is permitted").

Claim 24 and 30 is rejected for the same reasons as discussed in claim 23 above.

For claim 11, Kikuchi et al teach angel change information corresponding to each of a plurality of video data blocks is included in the entry point map (e.g. column 20, lines 35-65, figure 29 shows the destination address of angle cell number, which is an entry of the angle data).

For claim 31, Kikuchi et al teach controlling step includes ignoring the request for the angle change, if the request for the angle change is not permitted (e.g. figure 40, the system of Kikuchi et al ignoring the angle change by displaying to the user "no Angle Data").

7. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 5,870,523), Hirayama et al (US 5,819,003) and Tsuga et al (US 5,895,124, as applied to claims 1, 4, 5, 7, 8, 11, 14, 16, 17, 18, 19, 20,23- 25, 29, 30-34 above, and further in view of Sato et al (US 5,884,004).

See teachings of Kikuchi et al, Hirayama et al and Tsuga et al above.

For claim 12, Kikuchi et al, Hirayama et al and Tsuga et al fail to teach the address of the last interleaved video unit. Sato et al teach the address of the last

interleaved video unit (e.g. column 43, line 59- column 54, line 19). It would have been obvious for one ordinary skill in the art at the time the invention was made to incorporate the teaching of Sato et al into the teaching of Kikuchi et al, Hirayama et al and Tsuga et al to change the angle scene without reading unnecessary angle information (e.g. column 54, lines 1-19).

For claim 15, Kikuchi et al each reproduction path data are recorded as one or more angle blocks and the angel blocks are interleaved (e.g. column 43, line 59- column 54, line 19).

8. Claims 21, 22, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 5,870,523), Hirayama et al (US 5,819,003) and Tsuga et al (US 5,894,124) as applied to claims 1, 4, 5, 7, 8, 11, 14, 16, 17, 18, 19, 20,23- 25, 29, 30-34 above, and further in view of Na et al (US 6,504,996 B1).

For claims 21 and 27, Kikuchi et al teach an encoder configured to encode at least video data (e.g. column 7, lines 10-12). However, Kikuchi et al, Hirayama et al and Tsuga et al fail to teach a multiplexer configured to multiplex at least video data to create a transport stream according to control information of the controller. Na et al teach a multiplexer configured to multiplex at least video data to create a transport stream according to control information of the controller (e.g. column 12, lines 44-46). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Na et al into the teaching of Kikuchi et al, Hirayama et al and Tsuga et al for fast and robust data transmission.

For claims 22 and 28, Na et al teach a packetizer configured to packetize the transport stream from the multiplexer into source packets in accordance with a format of an optical disk, said packetizer controlled by the controller (e.g. column 8, lines 17-29).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakai et al (US 5,999, 698).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daquan Zhao whose telephone number is (571) 270-1119. The examiner can normally be reached on M-Fri. 7:30 -5, alt Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Thai Q, can be reached on (571)272-7382. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daquan Zhao/
Examiner, Art Unit 2621

/JAMIE JO VENT ATALA/
Examiner, Art Unit 2621